

(916) 654-4715

October 15, 1992

Members, Alternates, and Observers,  
California Traffic Control Devices Committee

Enclosed for your use, is a copy of the minutes from the meeting in Monterey held on Thursday, September 24, 1992. The next CTCDC meeting is tentatively scheduled for February in San Diego.

It is time to update our mail list. **If you wish to continue to receive copies of agenda and minutes, please fill out the attached mailer and return it to me.** Internal and external mail lists have been combined into one response form, Caltrans recipients should return the mailer by route slip.

Sincerely,

Jack M. Kletzman  
Executive Secretary, CTCDC

Enclosure

## **MINUTES**

### **CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE MEETING OF SEPTEMBER 24, 1992**

The third meeting of the CTCDC in 1992 was held in the City Council Chambers of Monterey on Thursday, September 24, 1992.

Chairman Mike Howard opened the meeting at 9:02 a.m. with the introduction of members and guests. The Chairman thanked the City of Monterey for its hospitality.

The following members, alternates, and guests were in attendance:

<b>ATTENDEES</b>	<b>ORGANIZATION</b>	<b>TELEPHONE</b>
Members (Voting)		
Mike Howard Chairman	California Highway Patrol, Sacramento	(916) 657-7222
Dick Folkers Vice-Chairman	League of California Cities, Palm Desert	(619) 346-0611
Roger Burger	County Supervisors Association of California, Alhambra	(818) 458-4014
Bruce Carter	County Supervisors Association of California, Redding	(916) 225-5661
Gary Foxen	Auto Club of Southern California, Los Angeles	(213) 741-4429
Perry Lowden	California Department of Transportation, Sacramento	(916) 654-4551
Russ Taft	California State Automobile Association, San Francisco	(415) 565-2304
Wayne Tanda	League of California Cities, San Jose	(408) 277-4304
Jack Kletzman Secretary	California Department of Transportation, Sacramento	(916) 654-4715

**CTCDC MINUTES**  
**September 24, 1992**

<b>ATTENDEES</b>	<b>ORGANIZATION</b>	<b>TELEPHONE</b>
Matthew Brown	Prolane Products	(310) 207-3431
Bob Brow	County of Sacramento	(916) 366-2227
Autar Chhina	California PUC	(415) 557-3674
Don Costan	Office of Traffic Safety	(916) 445-0527
Eric Crissman	County of Riverside	(714) 275-6800
Don Darnell	resident of Salinas	(408) 757-9408
Robert Donner	Caltrans HQ	(916) 654-4949
Randy Foust	County of Sacramento	(916) 440-5966
Joe Hollstein	City of Ceres	(209) 538-5789
Elaine Kingsley	CHP	(916) 657-7222
Gordon McLellan	GM services	(408) 739-7111
J. R. Morgan	County of Riverside	(714) 275-6800
Herb Parnell	County of Santa Cruz	(408) 425-2481
Bob Shanteau	City of Monterey	(408) 646-3999
Leo Thomason	California NGU Coalition	(702) 254-4180
Michael Trujillo	Natividad School, Salinas	(408) 753-5675
Robert Zeigler	County of Marin	(415) 499-6336

**CTCDC MINUTES**  
**September 24, 1992**

**RECOGNITION**

Special recognition was given to Mr. Bob Donner for his service to the Committee.  
Mr. Donner is retiring from Caltrans in December.

**MINUTES**

MOTION: By Perry Lowden, second by Bruce Carter, to adopt the minutes of the Palm Desert meeting held on May 21, 1992. Motion carried 8-0.

**89-9 EMERGENCY VEHICLE APPROACHING SIGN**

Dick Folkers said that, although there was general agreement on the project, insurance to cover the City of Sacramento has not yet been provided. Chairman Howard pointed out that the item has been carried on the agenda since July of 1989 and, in view of the fact that this was a continuing problem, asked if this item should be dropped. Folkers recommended a continuance because the project was at a point where it would either start or fail before the next meeting. Folkers agreed to notify the City that a continued lack of progress could lead to deletion of the item.

ACTION: Item continued.

**90-9 YEAR ROUND SCHOOL SIGNING**

Mr. Joe Holstein, the City Engineer, said that in Ceres, half the schools operate during the entire year and half do not. He wants to inform the motorist of this distinction. He is concerned that there are posted areas which do not have reduced speed zones to alert drivers. Because the speed limit is 25 mph, he cannot use WHEN CHILDREN ARE PRESENT signs at these locations and seeks to warn the motorist to expect children. Holstein believes a YEAR ROUND SCHOOL sign would be valid but was unable to obtain any corroborating statistics from the city police department.

**CTCDC MINUTES**  
**September 24, 1992**

**90-9 YEAR ROUND SCHOOL SIGNING** (continued)

Chairman Howard recalled that the Committee's reluctance to approve such a sign was based on the fact that WHEN CHILDREN ARE PRESENT covers school areas for a multiplicity of times and activities and is not necessary from an enforcement perspective. Holstein reiterated that WHEN CHILDREN ARE PRESENT is used in conjunction with a reduced speed limit. The problem is that these school areas have residential or collector streets zoned for 25 mph and there is no speed reduction specifically for the school. Perry Lowden asked if there is any evidence of a problem or if there were any substantiation that a YEAR ROUND SCHOOL sign would have an effect on motorist's behavior. Russ Taft said that the City of Fresno has such a sign and might be a source of information. Holstein suggested trying the sign, but Perry Lowden was concerned with liability resulting from non uniform sign installation. Holstein said that only SCHOOL signs have been erected and that does not give any indication of heavy pedestrian activity associated with year round schools. Activity in non- year round schools is significantly reduced during summer months. Taft sees benefit in the proposed signs for high speed rural areas, to alert motorists before they are able to see children. Bruce Carter sees a larger generalized problem in the disregard for traffic control devices. He is not sure another sign will change driver's behavior.

Mr. Michael Trujillo, Principal of Natividad School in Salinas, believes that year round schools are proliferating. He has observed motorists exceeding the speed limit, oblivious to children crossing and ignoring crossing guards at his school. Trujillo has seen YEAR ROUND SCHOOL signs at Incline Village and Fresno, and heard that a Florida school district is using such signs. Trujillo appealed to the Committee for the safety of the children. He also said that the Traffic Commissioner for the City of Salinas had rejected a previous request for such a sign because additional signs were not permitted. A newspaper article in 1990 named Natividad School as an area where people should be concerned with traffic. Police occasionally go after motorists who speed or who ignore crossing guards, but not with sufficient frequency. Trujillo said they had installed a signal at one location, and had crossing guards at another location, and this fails to decrease the speed of the majority of motorists.

**CTCDC MINUTES**  
**September 24, 1992**

**90-9 YEAR ROUND SCHOOL SIGNING** (continued)

Chairman Howard said he was familiar with enforcement issues and it was not possible for law enforcement to be at every school every day. Roger Burger established that the school was on a commuter route, that motorist saw the children, and are familiar with the area. Since drivers know a school zone exists, Burger questioned the usefulness of another sign telling motorists what they already know.

Gary Foxen said he had no problem with contacting the City of Fresno to see how effective this sign has been, but he thinks we are expecting far too much from traffic signs. The problems that have been described agree with Foxen's own observations of too much speed, disregard for crossing guards, and running traffic signals. These problems are much broader than a sign could ever hope to address. Foxen suggested a combination educational and enforcement program might help. He doubted that adding the requested sign would do any good at all, and if it gave anyone the feeling that they had an additional margin of safety, a worse problem would be created. Chairman Howard said it would be possible to put a lot of signs out there, but those who disregard signs will continue to do so. It is doubtful that additional signs will protect children or save a life. Bruce Carter agreed, saying that his experience has been that, like crosswalks, signs give a false sense of security.

Wayne Tanda characterized the perception being that an additional sign would convince motorists to be at least as careful for two months of the year, as they presumably are during the other ten months under existing signing. His experience with San Jose schools indicates the additional signs would not provide any measurable increase in safety. Tanda said that if motorists would be more careful because of a supplemental sign, San Jose would have tried this long ago. He concluded that in many areas, schools are utilized for purposes beyond the school semester, and to differentiate between year round schools and non-year round schools would detract from the fact that drivers must always be alert and careful around any school at any time.

**CTCDC MINUTES**  
**September 24, 1992**

**90-9 YEAR ROUND SCHOOL SIGNING** (continued)

Roger Burger is concerned that if one school is year round and has such a sign and there is a death or injury in June or July at another school, where there is no such sign, there would be major litigation but the sign would have had no effect on drivers behavior. Gary Foxen said that safety around schools is not so much a matter of signs as it is a matter of attitude of drivers and children.

Mr. Trujillo said that for two weeks there was heavy publicity announcing the opening of year round schools and there was no change in behavior of the driver in the months of July and August. Perry Lowden concluded that this is why he has difficulty believing that an additional plate would have any influence on drivers behavior.

Tanda pointed out that the Committee supports Mr. Trujillo efforts with respect to traffic safety, and did not want him to leave thinking that the Committee was ignoring any possibility to make the situation more safe. The consensus of the Committee was that a supplemental sign was merely a placebo which would add to the clutter and do nothing to alleviate the problem.

MOTION: By Russ Taft, second by Dick Folkers to seek statistical data from the City of Fresno, Incline Village, and Orange County, Florida. Motion carried 8-0.

ACTION: Item continued.

**CTCDC MINUTES**  
**September 24, 1992**

**91-7 LIGHT RAIL ALTERNATE FLASHING RED SIGNAL**

Russ Taft said the Light Rail Safety Subcommittee held a meeting on August 28, 1992. The assumption that left turn vehicles were struck by overtaking light rail was supported by limited data from the PUC. The data indicated that 50% to 60% of the accidents at controlled intersections involved illegal left turns.

Originally Gordon Chester of San Francisco suggested using standard PUC #4 alternating crossing lights as a warning. That has not been supported by the subcommittee. In order to identify problems, the PUC developed an accident report form. The subcommittee was reviewing this form to insure data accessibility and identify strengths and weaknesses. The subcommittee found the new form is a vast improvement over the old form, new data is consistent with prior data, and a diagram segment needs to be added to the new form.

The subcommittee discussed the use of a convex mirror to ease this problem. Such mirrors are common in Asia and Europe. San Francisco uses these mirrors for blind intersections. Some of these mirrors are polished stainless steel and some are glass. The advantage of stainless steel is that it withstands graffiti and breakage.

The goal of the subcommittee is to provide a recommendation for inclusion in the Manual of Traffic Control Devices for Light Rail to abate left turn accidents. The subcommittee will track various jurisdictions to determine the most effective devices.

Bruce Carter asked if light reflection posed a problem with convex mirrors. Taft said that it is not as big of a problem as one might think because the convex mirror makes the sun a very small point of light. Some countries use a visor over the mirror and have a sign which reads LEFT TURN USE MIRROR. Taft said the mirrors were used where there was no protected left turn and for blind intersections. Dick Folkers mentioned that Rancho Mirage was using this type mirror for driveways with restricted visibility entering major thoroughfares.

ACTION: Item continued.



**CTCDC MINUTES**  
**September 24, 1992**

**92-8 ROTO-FLECTOR**

No representative from Roto-Flector appeared before the Committee.

MOTION: By Bruce Carter, second by Roger Burger to delete the item.  
Motion carried 8-0.

ACTION: Item deleted.

**92-13 POLICE OR SHERIFF'S FACILITY SIGN**

Dick Folkers said that the proposed sign design was still being circulated for review by LOCC, CSAC, Calchiefs, and Calsheriffs.

ACTION: Item continued.

**92-14 PORTABLE TRAFFIC SIGNAL**

Perry Lowden recommended that this item be deleted. The device has a standard signal head which doesn't need Committee action. The device is intended to be used in construction zones.

MOTION: By Bruce Carter, second by Dick Folkers to delete the item. Motion carried 8-0.

ACTION: Item deleted.

**CTCDC MINUTES**  
**September 24, 1992**

**92-15 HOV LANE SIGN AND MARKINGS**

Gary Foxen observed that HOV lanes marking details had been omitted in the Chapter 6 revision of the State Traffic Manual. A note in the revised edition refers the reader to a separate document entitled HOV Guidelines. The new guidelines are very limited with respect to on-ramp and main line HOV lane markings and refer back to the State Traffic Manual. Foxen understands that the standards were removed because they are in a state of flux. He believes these details are important and would like to see the issue reconciled quickly and standards reestablished.

Perry Lowden said that each of the metropolitan districts had variations on HOV lane markings. All work well and for the time being there is no consensus of what the standard should be. Lowden noted that there are about one hundred fifty ramp configurations with each configuration containing minor variations, all of which adds to the complexity of establishing a standard. Foxen is mostly concerned with entrance and exit markings where he feels the need for uniformity is the greatest.

Russ Taft concurred with the need for standardization. He cited examples of confusion in traveling from San Rafael to Richmond where the HOV lane is the left lane and on the bridge is the right lane. This forces motorists to cross four or five lanes of traffic to use the HOV lane. On Route 101, the HOV requisite is two people on the highway, and three people to cross the bridge. Foxen noted that there is a movement to put HOV lanes on city streets as well as highways.

MOTION: By Gary Foxen, second by Bruce Carter that standards were needed, and Caltrans was encouraged to act as soon as possible, but that no further action by the Committee was warranted. Motion carried 8-0.

ACTION: Item completed.

**CTCDC MINUTES**  
**September 24, 1992**

**92-16 COUNTY ROUTE NUMBERING**

Tulare County is concerned about their county routes which were posted with county route numbering signs. For a long time the County has had no contact with the County Route Numbering Committee and, in an effort to save money, was not maintaining the county route markers. Gary Foxen was concerned that other counties are also doing this.

Bruce Carter, a member of the County Route Numbering Committee said the program is still active. In 1958, CSAC, in association with the National Association of Counties, started the route marker program. CSAC has published a pamphlet which describes the importance of the program, who developed the program, what routes would qualify for the program, and designed a sign. This sign was approved by the CTCDC and appears in the Traffic Manual as G25. Carter believes the program has been low profile because all the decisions about which routes should be designated as part of the system were made at the inception of the program. Since that time there have not been many new roads. The program became active in the last year because Siskyou County has added new routes. It is important to maintain the markers because a lot of the mapping agencies show these routes on their maps.

Should anyone be interested in designating routes for incorporation into the program, Carter suggested they contact Mr. John D. Mitchell, Department of Public Works [(916) 257-8311 ext. 288], Lassen County, who is the chairman of the committee. Roger Berger thinks this is a good program and suggested a publicity program through the auto clubs.

MOTION: By Gary Foxen, second by Bruce Carter affirming that the County Route Numbering Committee and program is still active and the CTCDC encourages the maintenance of the signs. Motion carried 8-0.

ACTION: Item completed.

**CTCDC MINUTES**  
**September 24, 1992**

**92-17 NATURAL GAS SIGN**

Mr. Leo Thomason represents the California Natural Gas Vehicle Coalition, whose purpose is to promote both the commercialization of natural gas vehicles and natural gas as a vehicle fuel. Members of the coalition include Pacific Gas & Electric Co., Southern California Gas Co., and San Diego Gas & Electric. The coalition is requesting Committee approval for a sign indicating the availability of natural gas for vehicles.

Thomason said there were more than 1500 natural gas vehicles currently operating in California and 46 public access stations. Sixteen of the stations are within a  $\frac{1}{2}$  mile of a highway. Ford, General Motors, and Chrysler are currently manufacturing dedicated natural gas vehicles. Most of the natural gas vehicles now operating are bi-fuel, meaning that they can operate on natural gas or gasoline. The bulk of vehicles are owned by businesses or corporations, rather than individuals. Most of the existing fueling stations are owned by utility companies and are located at a utilities operation center. In most cases they allow the public to come into their service center and fuel the vehicle.

Gary Foxen asked if, since most cars were business owned, the drivers were aware of fueling locations? Thomason said the coalition and the energy commission have provided operators with maps showing fueling locations, but they were trying to raise the level of awareness of station locations. Russ Taft said that the commission map is helpful but it is not as useful as a road side sign.

Bruce Carter asked if there were any incentives besides clean air to promote the use of this fuel? Thomason said there were incentives offered by the utilities to offset the higher cost of NGVs. It cost about \$4,000 more per vehicle for original equipment or to retrofit an existing vehicle. There is no direct incentive for the cost of fuel. Natural gas cost about 64¢ to 70¢ per an equivalent gallon. The mileage depends on the conversion equipment placed in the vehicle, but one would expect slightly less than the mileage for gasoline because the engine was designed to run on liquid fuel.

**CTCDC MINUTES**  
**September 24, 1992**

**92-17 NATURAL GAS SIGN** (continued)

Richard Folkers said his community was planning to use natural gas fueled busses and to open a natural gas fueling station. He believes this will be the trend throughout the state. Chairman Howard said the Federal Government was encouraging an increase of the numbers of alternate fuel vehicles.

Thomason said some of the stations are open 24 hrs and others require a call for access. The intent is that an initial call establishes a relationship leading to subsequent access. For example Southern California Gas Co. will give users a credit card and make arrangement for the motorist to continually use their facility. Lowden believes that under these circumstances the signs are more for program recognition than for motorist information. Thomason said they were trying to increase the awareness that this type fuel is available and make it easier for drivers to locate the station. The Committee became concerned about the number of symbol signs used to designate the various fuels. Lowden explained that the gas pump symbol designates a gas station. The proposed natural gas symbol shows a gas pump and to be consistent, this should indicate the availability of gasoline regardless of any other symbol.

Lowden said the original gas, food, and lodging sign package was intended for rural areas but later crept into urban areas. Howard mentioned that during the 1970's with the gas shortage, diesel became very popular and signs went up all over. Wayne Tanda asked how permanent were the stations? Thomason said that the growth patterns of oil companies adding natural gas service and an increasing number of stations involved indicates that natural gas will be here for the long term. Thomason said that the energy commission is supportive of this program and has four demonstration programs that it is funding for natural gas vehicles.

MOTION: By Dick Folkers, second by Russ Taft to continue this item to facilitate a meeting between Lowden and Thomason. Clarification of the motion by Tanda ; will the discussion coordinate all fuel signs? Lowden agreed. Motion carried 8-0.

ACTION: Item continued.

**CTCDC MINUTES**  
**September 24, 1992**

**92-18 GOLF CART SYMBOL SIGN**

Dick Folkers informed the Committee that he had received a letter from the FHWA dated July 14, 1992 recommending that , until a symbol sign is approved for experimentation, or adopted as a standard, a word message sign be used to mark golf cart routes and crossings. They further recommended that golf cart lanes be identified in a similar manner to bicycle facilities. The FHWA is considering allowing the use of a strong green color background for golf cart signs on a trial basis. Folkers said Palm Desert will probably use the word message signs.

Russ Taft observed that the green sign being considered by the FHWA is not consistent with other signing, which is yellow and black. The consensus of the Committee was opposed to using a green color.

MOTION: By Dick Folkers, second by Roger Burger to continue this item . Motion carried 8-0.

ACTION: Item continued.

**92-19 PEDESTRIAN CROSSING AHEAD SIGN**

Wane Tanda explained that Daly City requested consideration of a pedestrian crossing ahead sign. The proposal consists of a pedestrian crossing sign (W54A) modified by an arrow for this purpose. Chairman Howard questioned the utility of the sign. Bruce Carter pointed out that there is a standard plate crossing ahead but that the proposed symbol is unintelligible. Perry Lowden said that the purpose of a warning sign was to alert the motorist of something ahead. In many cases a warning sign adds emphasis to a regulatory device, but should not warn of a warning sign.

MOTION: By Gary Foxen, second by Bruce Carter not to approve the request. Motion carried 8-0.

ACTION: Item completed.

**CTCDC MINUTES**  
**September 24, 1992**

**92-20 FLASH LAMPS**

Mr. Matthew Brown recapitulated that at the last meeting off the agenda he presented two devices. His active taper device is intended for construction zones or night tapers and consists of synchronized flashing delineators. Perry Lowden sent a letter stating that the Traffic Manual's prohibition on using flashing light for delineation only applies to random flashing lights and does not prohibit synchronized lights.

Brown's second device is an incidence response device that is intended to replace flares. The ground level use conflicts with a 36" height requirement. Subsequent to his previous presentation, Brown added a tripod stand with messages and symbols. Brown said the tripod was to improve visibility.

Bruce Carter felt it would be acceptable to use on the ground as a flare. Perry Lowden said that it was unlikely that the Committee could judge the worth of the device and advised Brown to contact incident response teams for field testing and evaluation. Chairman Howard explained to Brown that the Committee does not endorse products. Howard said the system may have value and suggested that Brown could also contact the CHP Academy. Roger Burger said the Traffic Manual would not preclude any of the device.

Gary Foxen and Bruce Carter were concerned with using messages and arrows because of the size and direction of visibility. Russ Taft noted that this triangular shape is used with a red reflective border to warn of a hazard ahead and the device may require greater consistency.

Brown was requesting two approvals. One for ground level deployment and another approval or permission to experiment with the tripod device. Dick Folkers observed that this was something new and extraneous to the agenda. Lowden felt the tripod was a work zone sign unlike any existing standard, but may be worthwhile. Brown said he did not intend this to be a replacement for construction zone signs and understood the process for approval was to seek permission to experiment from the Committee. His device uses a tripod because the flasher unit is heavy and needs a stable base.

**CTCDC MINUTES**  
**September 24, 1992**

**92-20 FLASH LAMPS** (continued)

Chairman Howard reiterated that the device needed field testing to refine some of the design aspects, and he reminded the Committee that the whole discussion of the tripod was extraneous to the agenda item. The consensus of the Committee was that the series of ground level flashing lights could be used without the tripod and that the tripod could be used without symbols.

Tanda views the demonstration as three separate products- a light, a tripod, and a sign. He feels that whatever symbols are used should be consistent with existing standards and that any deviation is subject to committee decision. Brown stated that he was not proposing any non-standard symbols and what was non-standard was putting those symbols on this particular shape. Tanda responded that a sign is not just a symbol, it is the symbol, backing, shape, size, colors, and materials. The act of taking an element of a sign and putting it on another device results in a new device.

The consensus of the Committee was that the remaining devices had potential, but could not determine whether they were superior to those currently in use, without field evaluation.

MOTION: By Gary Foxen, second by Dick Folkers, amended by Roger Burger that there is nothing that would preclude the use of these devices at ground level, or at 36" height, nor would the use of the tented pyramid without symbols be precluded. Motion carried 8-0.

ACTION: Item completed.



**CTCDC MINUTES**  
**September 24, 1992**

**OFF AGENDA ITEMS.**

Dick Folkers announced that Mr. Frank Sherkow, Director of Transportation for Riverside County, indicated that, during a coordination meeting, a concern evolved about the lack of intercommunication between Type 90 controllers that local agencies have and Type 170 controllers used by the State. CSAC, LOCC, and Caltrans are considering a mandate, that as of 1994, all controllers will be able to interface. Bob Donner said that for the past ten years there has been an ongoing discussion between NEMA controller manufacturers to either write a common protocol or coordinate communications. Roger Burger believes that his traffic people have worked out a method to allow intercommunications.

Perry Lowden reminded the Committee that the Federal Government has mandated that all measurements will be metric by 1996 with only a three month widow for the change. Caltrans has not yet agreed. Lowden urged the panel to inform the LOCC and CSAC that this is on the Federal agenda and it's going to be expensive. Legislation will have to be changed and it will include all phases of engineering activity. It is estimated to cost upwards of \$40 million at the State level. Bruce Carter said that this is not a proposal but a mandate from the Congress. Lowden responded that it was a mandate in 1984 and Congress was persuaded to change its mind. Dick Folkers said that in view of his recent international travels the change seems inevitable. Russ Taft said it would be helpful to the public to have a phase in period where all the signs are in English and Metric units. Lowden and Carter said the regulations will preclude double posting.

**ADJOURNMENT**

MOTION: By Dick Folkers, second by Bruce Carter for adjournment. Motion carried 8-0. The meeting was adjourned at 12:10 PM.